

CLAIMS

1. An ion elution unit that generates metal ions from electrodes when a drive circuit applies a voltage between the electrodes,

5 wherein polarities of the electrodes are reversed cyclically with a voltage application halt period placed in-between.

2. The ion elution unit according to claim 1,
wherein eluted metal ions are either silver ions, or copper ions, or zinc ions.

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3. The ion elution unit according to claim 2,
wherein application of voltage to the electrodes is started after feeding of water is started.

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4. The ion elution unit according to claim 2,
wherein the applied voltage is so varied that a constant current flows between the electrodes.

5. The ion elution unit according to 2,

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wherein current flowing between the electrodes is detected by a current detection means, and the drive circuit is controlled based on the detection data, and a check of operation of the current detection means is carried out before the application of a voltage to the electrodes is started.

6. The ion elution unit according to claim 2,

wherein current flowing between the electrodes is detected by a current detection means, and the drive circuit is controlled based on the detection data, and operation of the current detection means is started when a predetermined period of time passes after the application of a voltage to the electrodes is started.

7. The ion elution unit according to claim 2,

wherein current flowing between the electrodes is detected by a current detection means, and the drive circuit is controlled based on the detection data, and when the current detection means detects abnormal current, a warning means notifies it to users.

8. The ion elution unit according to claim 7,

wherein even if the current detection means detects abnormal current, the warning means does not notify users of the abnormality on condition that normal current has been detected at least once during an ion elution process.

9. The ion elution unit according to claim 2,

wherein current flowing between the electrodes is detected by a current detection means, and the drive means is controlled based on the detection data, and when the current detection means detects that the value of the current flowing between the electrodes is a predetermined level or under, the lengths of the voltage application period and/or the voltage application halt period or the ion elution period are adjusted.

10. An appliance that incorporates the ion elution unit as set forth in one of

claims 2 to 9 and uses water mixed with metal ions generated by the ion elution unit.

11. The appliance according to claim 10,
wherein the ion elution period is adjusted according to the amount of water used.

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12. The appliance according to claim 10,
wherein the lengths of the voltage application period and/or the voltage application
halt period are adjusted according to the amount of water used or the length of ion elution
period.

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13. The appliance according to claim 10,
wherein a flow rate detection means is provided to measure the volume of water
flow in the ion elution unit, and the lengths of the voltage application period and/or the
voltage application halt period or the ion elution period is adjusted based on the measurement.

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14. An appliance that incorporates the ion elution unit as set forth in one of
claims 5 to 9, and when the current detection means detects abnormal current, specified
countermeasures are adapted.

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15. The appliance according to claim 14,
wherein the specified countermeasure is a temporary stop of the appliance
operation.

16. An appliance that incorporates the ion elution unit as set forth in one of

claims 5 to 9, and when the current detection means detects that the value of the current flowing between the electrodes is a predetermined level or under, the volume of water flow fed to the ion elution unit is reduced and the ion elution period is extended.

5 17. The appliance according to claim 10,
 wherein the appliance is a washer.

 18. The appliance according to claim 11,
 wherein the appliance is a washer.

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 19. The appliance according to claim 12,
 wherein the appliance is a washer.

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 20. The appliance according to claim 13,
 wherein the appliance is a washer.

 21. The appliance according to claim 14,
 wherein the appliance is a washer.

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 22. The appliance according to claim 15,
 wherein the appliance is a washer.

 23. The appliance according to claim 16,
 wherein the appliance is a washer.

24. An ion elution unit that generates silver ions by applying a voltage between silver electrodes disposed in a water feed passage, wherein polarities of the electrodes are reversed cyclically.